Remarks

The forgoing amendment has been made after a careful review of the present application, the references of record and the Office Action dated May 28, 2004. In the Office Action, the examiner required the applicant elect between three different species of the invention, the first as shown in Figs. 1 through 5, the second in Fig. 6, and the third in Fig. 7. The present Office Action was made following a conversation with Robert L. Marsh in which Mr. Marsh provisionally elected to prosecute the invention of Figs. 1 through 5. The applicant hereby confirms that the invention of Figs. 1 through 5 is elected to be prosecuted in this application.

The examiner objected to the specification as filed, because of a spelling error in the title of the invention. In applicant's attorney's telephone call with the examiner, John P. Fitzgerald, the applicant's attorney has learned that the word "volume" as scanned into the records of the Patent Office is spelled without the final "e." The enclosed amendment includes a restatement of the title of the invention.

The examiner also raised minor objections with respect to the drawings and some rejections under 35 US 112 to the claims. Claims 1 through 5, 6 through 12, 16 and 23 were rejected under 35 USC 102 (e) as being anticipated by Lorenzen, and claims 13, 14, and 17 – 20 were rejected under 35 USC 102 (e) as being anticipated by Lorenzen. Claims 21 and 22 were also rejected under 35 USC 102 (e) as being anticipated by Lorenzen and claims 1 – 5, 10, 11, 12, and 16 were rejected under 35 USC 102 (b) as being anticipated by Estevez-Garcia. Claims 13 and 17 through 20 were rejected under 35 USC 102 as being anticipated by

Estevez-Garcia and claims 21 and 22 were also rejected under 35 USC 102 (b) as being anticipated by Estevez-Garcia.

In the forgoing amendment, the applicant has amended the title as described above, and amended the drawings to overcome the objection noted by the examiner thereto. The applicant has also amended claim 1 and canceled claims 8 and 11 through 22. Claim 10 has also been amended and new claim 24 has been added. The remaining claims all relate to the invention shown in Figs. 1 through 5 of this application.

Claim 1 has been amended to clarify that the magnetically conductive member defines an axis defined by the north and south poles, and that the magnetically conductive member has a thickness perpendicular to the axis with some portions of the member being thicker than others. New claim 24 has been added which is similar to claim 1 but clarifies that the magnetically conductive member has a thickness that is perpendicular to a direction of magnetic field emanating from the conductive member.

The applicant submits that the changes made to the drawings do not constitute new matter. The magnetic member has been described in the specification as having north and south poles as shown in the drawings. The direction of flux as emanating from the outer surface 30 is also discussed, as is the fact that the flux defines a circuit. Therefore, the addition of an "axis" extending generally between the poles, as has been added to Fig. 3, does not constitute new matter.

The applicant hereby traverses the rejection of the remaining claims, those being 1 through 7, 9 through 12, and 24 as being anticipated by Lorenzen. Lorenzen discloses a device for measuring the volume of liquid in a tank having a float and a member having a magnetic field pass there through and a Hall effect sensor. Lorenzen fails, however, to disclose the elements added by the current amendment to claim 1, that being that the north and south poles generally define an axis and the conductive member has a thickness taken perpendicular to said axis wherein a greater magnetic field passes through the thicker portions of the member than the thinner portions thereof. New claim 24 has language similar to the patentably distinct language added by amendment to claim 1. Specifically, claim 24 recites that the magnetically conductive member has a thickness perpendicular to a direction of magnetic flux emanating from the conductive member and that the thickness varies across the contour of the magnetic member.

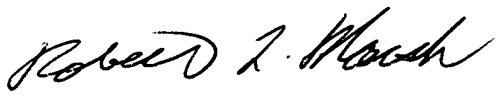
The examiner has shown in the Office Action a portion of Fig. 22 of Lorenzen and asserted that the designated portions thereof have thickness greater than other portions. The applicant states that the thickness of the portion designated by the examiner does not vary in a direction perpendicular to the direction of flux emanating from the surface thereof as required by new claim 24, or in a direction parallel to an axis defined by the north and south poles, as required by amended claim 1. As explained in the specification, the variations in the thickness of the conductive member create portions along the contour of a surface thereof of enhanced magnetic strength. This element is not disclosed in Lorenzen and therefore the

applicant submits that rejection of claims 1 and those dependent upon claim 1 has been traversed.

In similar fashion, the applicant hereby traverses the rejection of claims 1 through 5, 10, 11, 12, and to the extent applicable, new claim 24 as being anticipated by Estevez-Garcia. Estevez-Garcia is cited as having a magnetic element creating a field and a sensor that responds to changes in the orientation of the magnet as the level of liquid in the container changes. Like the Lorenzen reference, the Estevez-Garcia reference fails to disclose a magnetic member having a thickness, where the thickness is taken in a direction either perpendicular to a axis extending between the poles, or perpendicular to the direction of flux emanating from a surface of the magnetic member. Accordingly, the rejection of claims 1 though 5 and 10 through 12 under 35 USC 102 (b) must now be withdrawn.

In view of the cancellation of all other rejected claims, the applicant believes that the present application is now in condition for allowance and reconsideration and allowance of the application is requested.

Respectfully Submitted,



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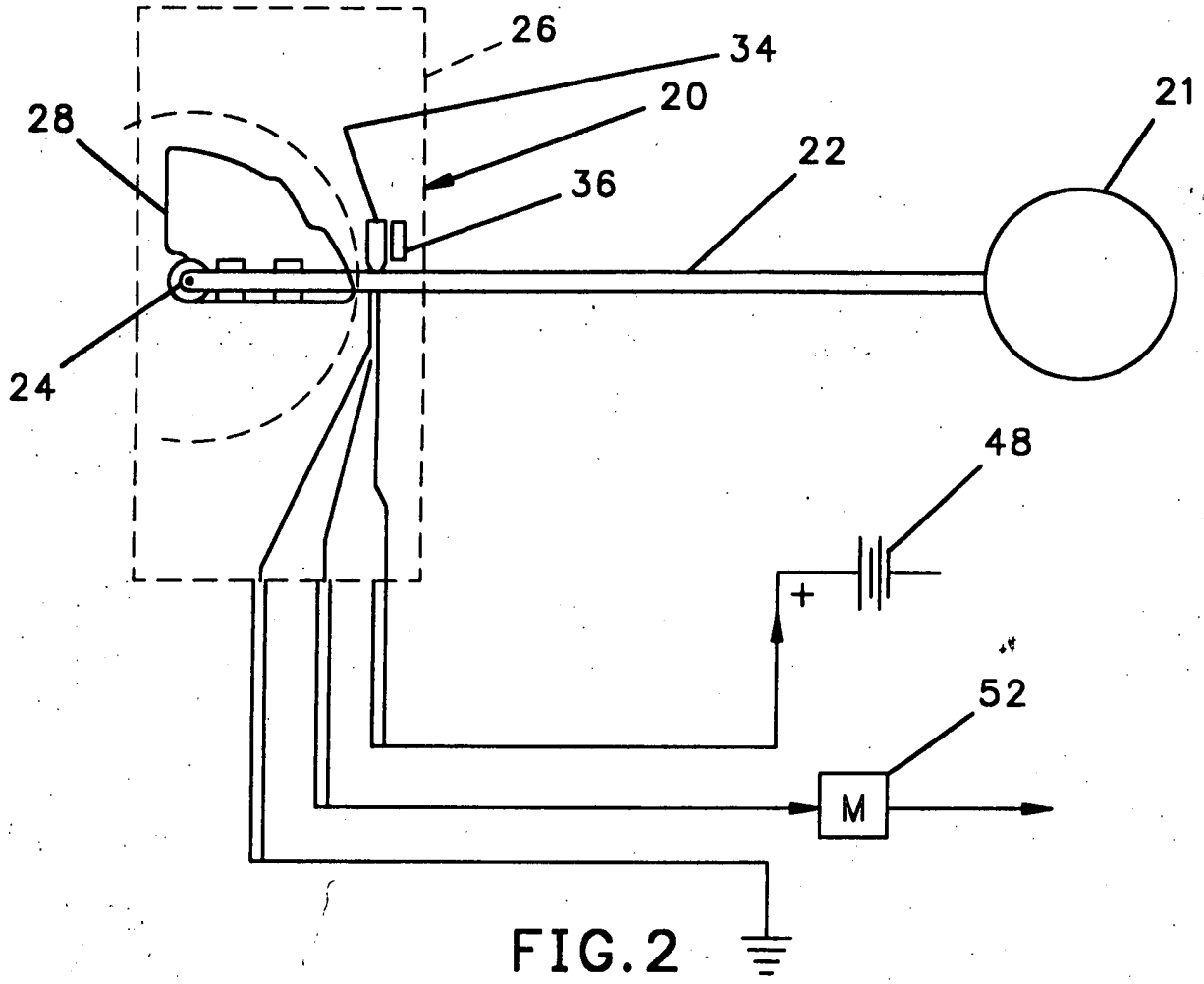

FIG. 2

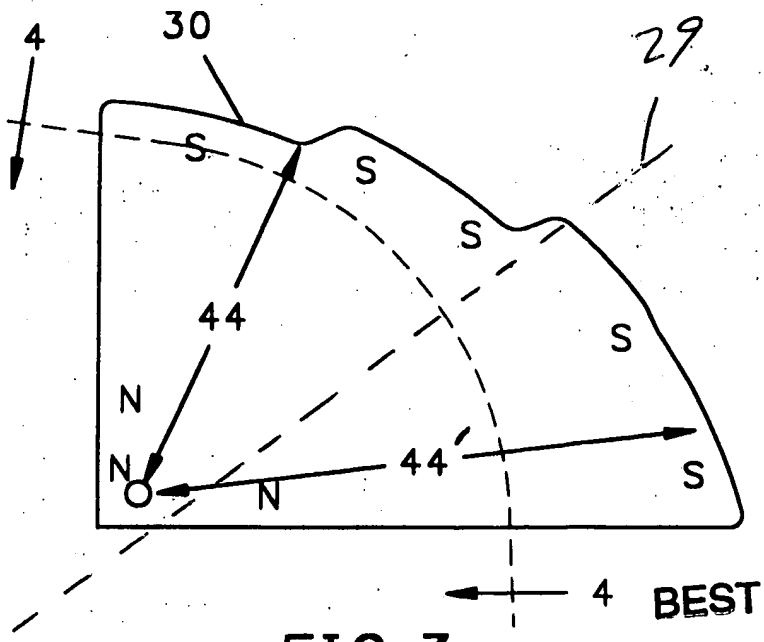

FIG. 3

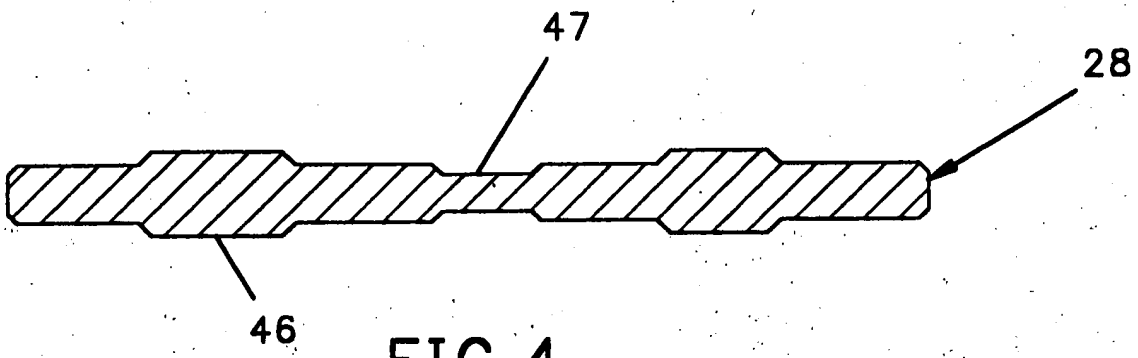

FIG.4

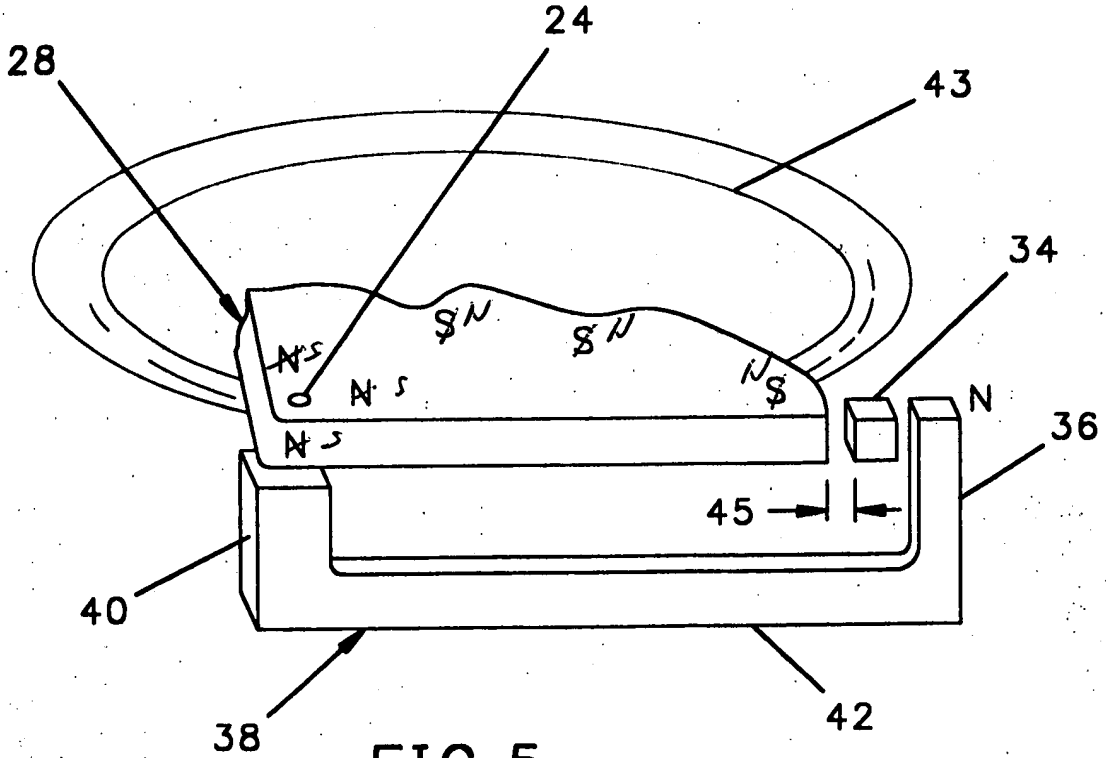

FIG.5